SEMICONDUCTOR

TECHNICAL DATA

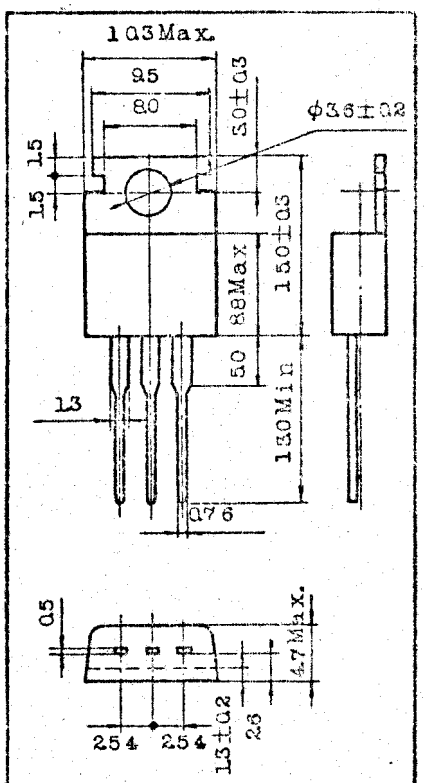
TOSHIBA TRANSISTOR

2SC2098

SILICON NPN EPITAXIAL PLANAR

- The 2SC2098 is designed for 25～50MHz RF power amplifier applications
- RF power output 13W MIN. f=28MHz Vcc=12V
  High power gain 11dB MIN.
- Recommended for 12W PEP SSB Citizen Band transceiver

Unit in mm



1. BASE
2. COLLECTOR(HEAT SINK)
3. EMITTER

JEDEC	TO-220AB
EIAJ	SC-46
TOSHIBA	2-10

MAXIMUM RATINGS (Ta=25 °C)

CHARACTERISTIC	SYINBOL	RATING	UNIT
Collector to Base Voltage	V_{CBO}	70	V
Collector to Emitter Voltage (R_{EB}=1 Ω)	V_{CER}	70	V
Emitter to Base Voltage	V_{EBO}	4	V
Collector Current	I_C	6	A
Emitter Current	I_E	−6	A
Collector Power Dissipation (Tc=25°C)	Pc	25	W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	55～150	°C

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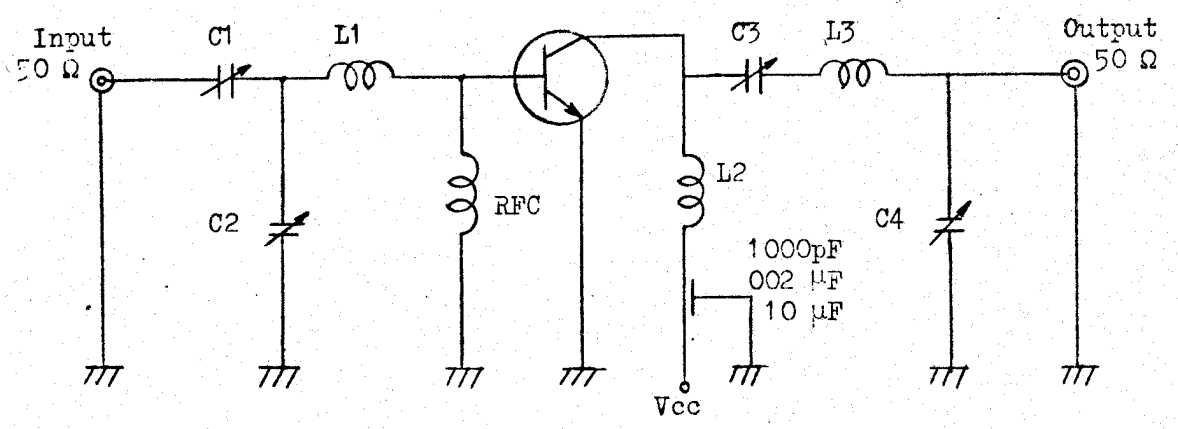
ELECTRICAL CHARACTERISTICS Ta=25°C

CHARACTERISTIC	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
Collector Cutoff Current	I_{CBO}	V_{CB}=40V I_E=0	—	—	0.1	mA
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=10mA I_E=0	70	—	—	V
Collector to Emitter Breakdown Voltage (R_{EB}=100)	$V_{(BR)CER}$	I_C=10mA I_E=0	70	—	—	V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	I_C=10mA I_B=0	4	—	—	V
DC Current Gain (Note1)	h_{FE}	V_{CE}=5V I_C=4A	20	—	100	—
Output Capacitance	Cob	V_{CB}=10V I_E=0 f=1MHz	—	55	80	pF
Power Output (1) (Fig 1)	Po(1)	Vcc=12V f=28MHz Pi=1W $\eta c \geq 60\%$	13	15	—	W
Power Output (2)	Po(2)	Vcc=12V f=50MHz Pi=3W $\eta c \geq 60\%$	—	16	—	W

Note 1 : Pulse Width≦100μS Duty Cycle≦3%

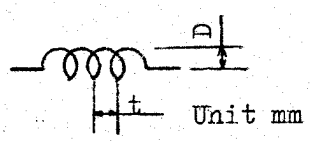
Fig 1 Output Power Test Circuit (f=27 MHz)



C1 : ~100pF Variable Capacitor

C2 C3 : ~150pF Variable Capacitor

C4 : ~300pF Variable Capacitor

L1 L3 : φ0.8 Silver Plated Copper Wire 8T D=10 t=2

L2 : 〃 5T D=10 t=2